

rate of the coolant supplied to the core based on increasing a number of revolutions of the pump during one period from a beginning of one fuel cycle [to] and before an end of the one fuel cycle; and

further increasing the flow rate ^{of} coolant supplied to the core based on increasing the number of revolutions of the pump during [an end portion] another period after the one period to an end of the one fuel cycle in a state in which the at least one water rod is completely filled with the coolant.

Please cancel claim 25 without prejudice or disclaimer of the subject matter thereof.

Please amend claim 26 as follows:

26. (amended) A method according to claim [25] 24, wherein each of said plurality of fuel assemblies include an upper tie plate, a lower tie plate, the plurality of fuel rods having upper [ends] end portions held by the upper tie plate and lower [ends] end portions held by a fuel rod holding portion of the lower tie plate, the fuel rods being each filled with a plurality of fuel pellets, and the at least one water rod being arranged among the fuel rods, a resistance member provided at a lower end portion of the fuel assembly, a coolant ascending path in which the at least one water rod has a coolant inlet port open in a region lower than the resistance member, and a coolant descending path which is communicated with the coolant ascending path and which has a coolant delivery port that is open in a region higher than the

resistance member, in order to guide the coolant downwardly in an opposite direction to a direction in which the coolant flows in the coolant ascending path.

Please cancel claims 27, 28, 38 and 39 without prejudice or disclaimer of the subject matter thereof.

Please amend claims 40-43 as follows:

Claim 40, line 1, delete "38, further comprising";
line 2, delete "the step of locating" insert --26,
wherein--;

line 3, after "rod" insert --is located--.

Claim 41, line 1, delete "38, further comprising";
line 2, delete "the step of locating" insert --26,
wherein--;

line 3, after "rod" insert --is located--.

Claim 42, line 1, delete "further comprising";

line 2, delete "the step of locating";

line 3, after "rod" insert --is located--.

Claim 43, line 1, delete "further comprising";

line 2, delete "the step of locating";

line 3, after "rod" insert --is located--.

Please cancel claims 44-49 and 51 without prejudice or disclaimer of the subject matter thereof.

Please amend claims 52-54, 56 and 57 as follows:

52. (amended) A method for operating a nuclear reactor having a reactor vessel and at least one fuel assembly loaded in a core arranged inside the reactor vessel, the at least one fuel assembly having an upper tie plate, a lower tie plate, a plurality of fuel rods having upper [ends] end portions held by the upper tie plate and lower [ends] end portions held by a fuel rod holding portion of the lower tie plate, at least one water rod arranged among the fuel rods, and a resistance member at a lower end portion of the at least one fuel assembly, the plurality of fuel rods having a plurality of fuel pellets therein, and the at least one water rod having a coolant ascending path including a coolant inlet port which is open in a region lower than the resistance member, and a coolant descending path which is communicated with the coolant ascending path, the coolant descending path having a coolant delivery port open in a region higher than the resistance member, the coolant being guided downwardly in the coolant descending path in an opposite direction of the coolant flow in the coolant ascending path, the method comprising the step of regulating a flow rate of the coolant supplied to the core by a pump including the steps of:

raising a coolant surface formed between the coolant and a vapor in the at least one water rod by increasing the flow rate of the coolant supplied to the core based on increasing a number of revolutions of the pump during [at least] one period from a beginning of one fuel cycle [to] and before an end of the one fuel cycle; and

further increasing the flow rate of the coolant supplied to the core based on increasing the number of revolutions of the pump during [the at least one] another period after the one period to an end of the one fuel cycle in a state in which the at least one water rod is completely filled with the coolant and no vapor is present in the at [least one water rod at least at the end of the one fuel cycle] the another period.

53. (amended) A method according to claim 52, wherein the step of raising the coolant surface includes increasing the flow rate of the coolant in the range of 0% to less than 110% of the flow rate during the one period and the step of further increasing the flow rate of the coolant includes increasing the flow rate above 110% of the flow rate during the another period.

54. (amended) A method for operating a nuclear reactor having a reactor vessel and at least one fuel assembly loaded in a core arranged inside the reactor vessel, the at least one fuel assembly having an upper tie plate, a lower tie plate, a plurality of fuel rods having upper [ends] end portions held by the upper tie plate and lower [ends] end portions held by a fuel rod holding portion of the lower tie plate, a plurality of water rods arranged among the fuel rods, and a resistance member at a lower end portion of the at least one fuel assembly, the plurality of fuel rods having a plurality of fuel pellets therein, and each of the water rods having a coolant ascending path including a coolant inlet port which is

open in a region lower than the resistance member, and a coolant descending path which is communicated with the coolant ascending path, the coolant descending path having a coolant delivery port open in a region higher than the resistance member, the coolant being guided downwardly in the coolant descending path in an opposite direction of the coolant flow in the coolant ascending path, the method comprising the steps of:

loading a plurality of the fuel [assembly] assemblies in the reactor core; and

controlling the amounts of voids accumulated in the water rods by regulating a number of revolutions of a pump supplying coolant to the core.

56. (amended) A method according to 54, wherein the step of controlling the amount of voids includes the step of regulating a flow rate of coolant supplied to the core including the steps of:

raising a coolant surface formed between the coolant and a vapor in the [at least one] water [rod] rods by increasing the flow rate of the coolant supplied to the core based on increasing the number of revolutions of the pump during [at least] one period from a beginning of one fuel cycle [to] and before an end of the one fuel cycle; and

further increasing the flow rate of the coolant supplied to the core based on increasing the number of revolutions of the pump during the [at least one] another period in a state in which the [at least one] water [rod is] rods are completely